305 . 250

Work Order ID 99321

April-05-13 1:17:38 PM

99321

Item ID: D2570
Revision ID:
Item Name: Bushing

Accept *N900040100*

Setup **Start** *NS1*
Stop *NS2*

Start Date: 4/12/13 **Start Qty:** 160.00 *160*
Required Date: 4/12/13 **Req'd Qty:** 160.00 *160*
Reference:

Cust Item ID:
Customer:

Run **Start** *NR1*
Stop *NR2*

Approvals: **Process Plan:** MLJ **Date:** 13-04-08 **Tooling:** ________ **Date:** ________

QC: ________ **Date:** ________ **SPC (Y/N):** ________ **Date:** ________

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours		Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	**Revision Nbr**									
D2570	Rev B									
100 *100* Hardinge / Hardinge CNC Lathe Small	Hardinge CNC LATHE SMALL / **Memo** Machine as per folio FA258Deburr	0.00 / 0.00	13-4-9				~~167~~ 174	Ø		DAS 13 9-89
110 *110* QC / Quality Control	QC2- Inspect parts off machine FAI/FAIB / **Memo**	0.00 / 0.00	13-4-9				~~167~~ 174	Ø		DAS 13 9-89
120 *120* QC / Quality Control	QC8- Inspect parts - second check / **Memo**	0.00 / 0.00	D.A 13/04/11				174	Ø		DAS 08 9-89

DQA: ________ Date: ____________

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: ______	**DISPOSITION**	**AGAINST DEPARTMENT/PROCESS**			
Part No. ______	Rework ☐	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
NCR No. ______	Scrap ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
	Use-as-is ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
	Work Order Update ☐	Large Fab ☐	Composite ☐	Supplier ☐	☐

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data ☐									
Equip/Tooling ☐									
Operator ☐									
Material ☐									
Setup ☐									
Other ☐									
Process ☐									
Supplier ☐									
Training ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear	General			
☐ Bending	☐ Bend	☐ Grain	☐ Ovalized	☐ Pressure/Forced
☐ Centre Not Concentric to O/S	☐ BOM/Route	☐ Hardware	☐ Over/Under tolerance	☐ Temperature/Cure
☐ Cracks	☐ Broken/Damaged	☐ Inspection Incomplete	☐ Part Incorrect	☐ Weld
☐ Crushed/Crimped	☐ Burrs	☐ Instructions Incomplete/Unclear	☐ Part Lost/Missing	☐ Wrong Stock Pulled
☐ Cuffs	☐ Contamination	☐ Maintenance	☐ Part Moved	
☐ Heat Treat	☐ Countersink	☐ Mislabeled	☐ Positioned Wrong	
☐ Inspection Strip in Tube	☐ Cut Too Short	☐ Misread	☐ Power Loss/Surge	☐ Other ______
☐ Ripples in Bend	☐ Drill Holes	☐ Offset		______
☐ Torque Waves in Extrusion	☐ Drawing	☐ Out of Calibration		______
☐ Turning Sequence	☐ Finish	☐ Out of Sequence		______
☐ Wave/Twist in Tube	☐ Folio	☐ Outside Dimensions		

Work Order ID 99321 *99321*

April-05-13 1:17:38 PM

Item ID: D2570 **Accept** *N900040100* **Setup** **Start** *NS1* **Stop** *NS2*

Revision ID:

Item Name: Bushing

Start Date: 4/12/13 **Start Qty:** 160.00 *160* **Cust Item ID:**

Required Date: 4/12/13 **Req'd Qty:** 160.00 *160* **Customer:**

Reference:

Run **Start** *NR1* **Stop** *NR2*

Approvals: **Process Plan:** ________ **Date:** ______ **Tooling:** ________ **Date:** ______

QC: ________ **Date:** ______ **SPC (Y/N):** ________ **Date:** ______

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130*	Identify as per dwg & Stock Location: ST011	0.00							
Packaging Packaging	**Memo**	0.00				174X			SP 13-4-12
140 *140*	QC21- Final Inspection - Work Order Release	0.00							
QC Quality Control	**Memo**	0.00					13/4/15		

13-04-12

DQA: ________ Date: ____________

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: ______	DISPOSITION	AGAINST DEPARTMENT/PROCESS
Part No. ______	Rework ☐	Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
NCR No. ______	Scrap ☐	Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
	Use-as-is ☐	Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
	Work Order Update ☐	Large Fab ☐ Composite ☐ Supplier ☐ ☐

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data ☐									
Equip/Tooling ☐									
Operator ☐									
Material ☐									
Setup ☐									
Other ☐									
Process ☐									
Supplier ☐									
Training ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear	General			
☐ Bending	☐ Bend	☐ Grain	☐ Ovalized	☐ Pressure/Forced
☐ Centre Not Concentric to O/S	☐ BOM/Route	☐ Hardware	☐ Over/Under tolerance	☐ Temperature/Cure
☐ Cracks	☐ Broken/Damaged	☐ Inspection Incomplete	☐ Part Incorrect	☐ Weld
☐ Crushed/Crimped	☐ Burrs	☐ Instructions Incomplete/Unclear	☐ Part Lost/Missing	☐ Wrong Stock Pulled
☐ Cuffs	☐ Contamination	☐ Maintenance	☐ Part Moved	
☐ Heat Treat	☐ Countersink	☐ Mislabeled	☐ Positioned Wrong	
☐ Inspection Strip in Tube	☐ Cut Too Short	☐ Misread	☐ Power Loss/Surge	☐ Other ______
☐ Ripples in Bend	☐ Drill Holes	☐ Offset	______	
☐ Torque Waves in Extrusion	☐ Drawing	☐ Out of Calibration	______	
☐ Turning Sequence	☐ Finish	☐ Out of Sequence	______	
☐ Wave/Twist in Tube	☐ Folio	☐ Outside Dimensions		

Picklist Print

April-05-13 1:17:37 PM

Work Order ID: 99321

Parent Item: D2570 **Start Date:** 4/12/13 **Required Date:** 4/12/13

Parent Item Name: Bushing **Start Qty:** 160.00 **Required Qty:** 160.00

Comments: IPP E02.08.29Re-format; Removed finishing; Material changeKJ
IPP F 07.07.06 rev B dwg EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M303R0.750 303 Round Bar 0.750		Purchased	No			100	f	208.4020	**0.0771**	**12.985264**	13 - 4410		DAS 13 9-89

Location	Loc Qty	Loc Code	
MAT028	208.402		
117328	26.484		
117798	8.008		
118509	8.16		
119346	1.29		
120145	21.132		
121070	2.2		
121157	0.374		
122166	1.66		
122386	17.089		
122734	7.005		
123313	115		14 ft

2 ft
6 ft
6 ft

DQA: ________ Date: ______________

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: ______________________

Part No. ______________________

NCR No. ______________________

DISPOSITION

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
Large Fab ☐	Composite ☐	Supplier ☐	☐

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data ☐									
Equip/Tooling ☐									
Operator ☐									
Material ☐									
Setup ☐									
Other ☐									
Process ☐									
Supplier ☐									
Training ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped.
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

General

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other ______________________

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

DART AEROSPACE LTD	Work Order:	99321
Description: Bushing	Part Number:	D2570
Inspection Dwg: D2570 Rev: B		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

[X] First Article [ ] Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.800	+/-0.010	802	✓		V-4	Vers
0.060	+/-0.005	.062	✓			
R0.010	+0.010/-0.000	R.015	✓			
Ø0.425	+0.000/-0.002	424	✓			
Ø0.257	+0.006/-0.001	.258	✓			
Ø0.750	+/-0.010	.746	✓			
0.030 x 20°	+/-0.010	.03x20°	✓			

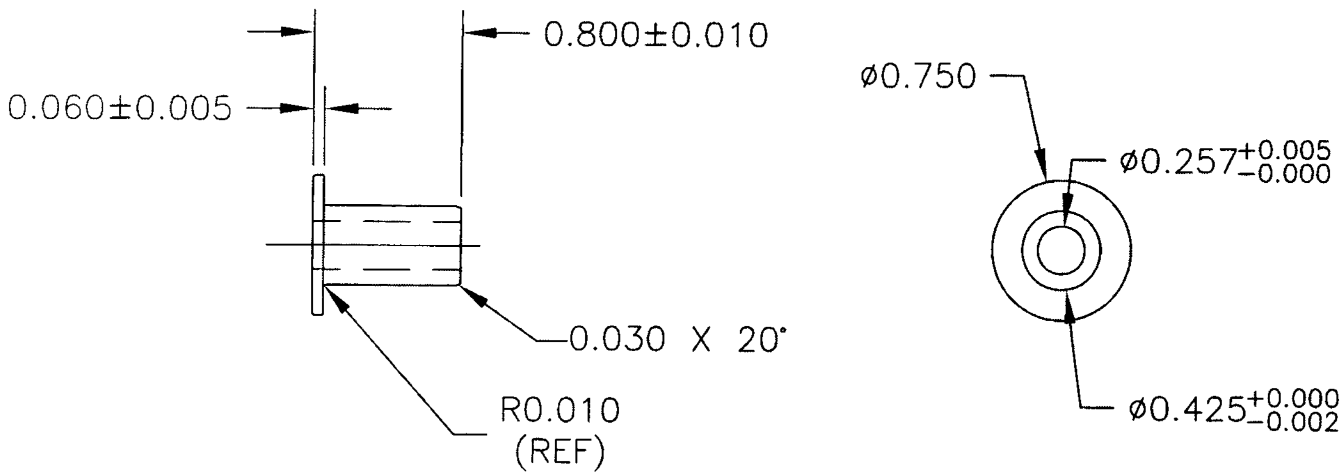
Measured by:	DAS 13 9-89	Audited by:	D.A DAS 08 9-89	Prototype Approval:	N/A
Date:	13-4-9	Date:	13/04/11	Date:	

Rev	Date	Change	Revised by	Approved
A	03.12.08	New Issue	KJ/RF	
B	04.02.23	Tolerance for Ø0.425 changed	KJ/RF	
C	07.07.17	Dimensions updated per Dwg Rev. B	KJ/JLM	
D	08.07.23	Tolerance for Ø0.257 revised	KJ/DD	

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D2570 — REV. B — SHEET 1 OF 1
DATE 07.04.17		TITLE BUSHING — SCALE 1:1

A	96.09.16	NEW ISSUE
B	07.04.17	UPDATE NOTES

RELEASED



D2570 BUSHING

D2570 BUSHING

1) MATERIAL: AISI 303 ROUND BAR (REF. DART SPEC. M303R)
2) FINISH: NONE
3) ALL DIMENSIONS ARE INCHES
4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
5) BREAK ALL UNMARKED SHARP EDGES TO 0.010 MAX